

# LUCKNOW: FROM TRADITION TO MODERNITY

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## **LUCKNOW: FROM TRADITION TO MODERNITY**

A.K. Singh and S.S.A. Jafri\*

Lucknow has been a prominent city of northern India at least since the middle ages, though its origin can be traced to antiquity. It acquired fame after the nawab-wazirs of Oudh made it their capital in 1776. It has remained an important cultural and political centre of India through the last two and a half centuries since then. Much has been written and talked about its beautiful gardens, scenic location, grandeur of its historical buildings and its refined culture. It has been called a city of gardens and Babylon of the east<sup>1</sup>. Though many of these gardens have now been converted into thickly populated localities, they still have the suffix 'bagh' (garden) attached to their names, a reminder of their past. Bishop Hebbel compared Lucknow with Moscow, while William Russell was wonderstruck by its unbelievable beauty<sup>2</sup>. To Rosie Llewellyn-Jones Lucknow appeared as a city of dream<sup>3</sup>. The British during their hundred year rule contributed to the development of the city. Lucknow continued to grow rapidly after Independence as the capital of most populated state of India. In 1981 Lucknow joined the ranks of the million cities in the country. In recent years Lucknow has emerged as an important centre of education and commerce and witnessed hectic construction activity. Rapidly the city is shedding its tradition and acquiring the mannerism and looks of a modern metropolitan city.

### **LOCATION**

Lucknow lies between 20°.30' and 27°.10' N latitude and 80°.30' and 81°.13' E. longitude. The city is very favourably located at a junction of three National Highways. The N.H. 24 links it to Delhi in the north; N.H. 25 links it to west and south via Kanpur, Jhansi and Bhopal; and N.H. 28 links it to Patna and Calcutta in the east via Gorakhpur. It is also well connected with the railway network falling in the Northern and North Eastern railway zones. Lucknow has air links with Allahabad, Calcutta, Delhi and Mumbai as well as Sharjah.

The city is located on two sides of the river Gomti, which passes through the city flowing from North-West to South-East. Ancient travellers had narrated that the entire area occupied by the city was a low lying swampy area with marshes. Rest of the land was wet and sandy. This made the city vulnerable to floods. Major floods occurred in 1915, 1923 and 1971 inundating large parts of the city and causing much loss of life and property. Following the floods the river banks in the city were reinforced by high bunds. Water flow over the years in the river

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Gomti has also declined considerably. The climate is subject to extreme fluctuation of temperature, which rises generally upto 45° centigrade in summer months but falls to 4-5° centigrade in winter. The average annual rainfall is between 80-100 cm, most of it occurring during the monsoon period.

### **HISTORICAL BACKGROUND**

Legend has it that the city is named after Lakshman, the brother of Lord Ram. However, the origin of the name 'Lucknow' is not definitely traceable, and whatever traditions are available are of extremely doubtful historical authenticity.<sup>4</sup> Even the Ain-I-Akbari, while dealing with the Sarkar of Lucknow as a part of Suba of Awadh, does not throw any light on the origin of the name of Lucknow, though its author Abul Fazal paid glowing tributes to the delightful surroundings of the place<sup>5</sup>.

From around the eleventh century AD the city came under successive control of the Sheikhs, the Pathans and the Sultans of Delhi. A general of Mahmud Ghaznavi, Syed Salar Masud came with his followers between 1031-33 AD and his forces also settled at Bijnore Pargana about 10 km. south of Lucknow. He was deputed to reduce the principality of Awadh to submission. The newcomers were called Shaikhzadas and they built a Qila (fort) on the site of Teele-Wali-Masjid and shrine, where only a village of Ahirs (milkmen) had existed. It is believed that the Qila was named after an Ahir called Lakhna around 1250 AD<sup>6</sup>. The town that grew around the fort thus acquired the name of Lucknow.

Sher Shah Suri established a silver and copper mint at Lucknow. Akbar appointed Abdur Rahim Khan-e-Khana, the well known poet as the subedar of Lucknow. He built the palaces called Panch Mahal and Machchi Mahal. Several mohallas were built during this time. Shah Meena, a respected sufi saint lived here in the fifteenth century and died here in 1465 AD. His dargah still draws crowds of people and a street named after him still exists. The Shaikhs exerted influence over a wide area until 1720, when the Great Mogul Emperors began to appoint Nawab-Wazirs from Delhi in place of local Subedars.

Nawab Saadat Khan (1720-39) defeated the Sheikhzadas and wrested the Mubarak Mahal and Panch Mahal from them. Nawab Safdar Jang (1739-56), who established his capital at Faizabad, secured the ownership of these buildings by giving 1000 bighas of land near Dogawan (now part of city) to the Shaikhs.



A new chapter in the history of Lucknow began from 1775, when Nawab Asifuddaula (1775-98) shifted the capital to Lucknow. A flurry of construction activities started and some of the most well known buildings of Lucknow were built during this period. These included the famous Bara Imambara, Asifi Mosque, Roomi Darwaza, the old British Residency and Chowk Bazar. Claude Martin a French adventurer, who assumed political importance as advisor to the nawab and amassed great wealth, built some of the well known and magnificent buildings and palaces like and Farhat Bux Palace (Chattar Manzil) and Constantia. The latter now houses a public school called La Martinier named after its builder.

The phase of creation of magnificent palaces and buildings continued unabated till the end of the Nawabi rule in 1856<sup>7</sup>. Nawab Saadat Ali Khan (1798-1814), built Dilkusha Palace, Bailey Guard Gate, Lal Baradari, Begum Kothi and Khursheed Manzil. The mohallas called Sadatganj, Rakabganj, Golaganj and Molviganj also came into existence during his period. Nawab Ghazi-Ud-din Haider (1814-27) constructed Haider Canal, the tomb of his parents, Shah Najaf Imambara and Badshah Bagh. Nawab Mohammad Ali Shah (1837-42) beautified Husainabad with a small Imambara and built a tank and Shahi Jama Masjid. Nawab Amjad Ali Shah (1842-48) erected the iron bridge over the river Gomti. Also Hanuman Mandir of Aliganj, Ganeshganj, Chandganj and Sikandarbagh Mohalla were the contributions of later Nawabs.

Lucknow reached the zenith of its glory in splendour of its kings and their palaces and the richness of its culture during the reign of Wajid Ali Shah (1848-56), the last ruler of Awadh. The complex of buildings at Kaiserbagh including China Gate and saffaid baradari was built by him. Lucknow suffered a lot during the turbulent period of the First War of Independence (1857-58). The ruins of the residency buildings were preserved by the British without an attempt at restoration to stand as a mute witness of the prolonged seize of the complex and its courageous defence by the British. On February 7, 1856 the British forces finally captured Lucknow city and brought the nawabi rule to its end.

It was during the nawabi rule that Lucknow emerged as an important trading and cultural centre of north India attracting a large number of European adventurers, traders, artists and musicians. The city acquired an unparalleled fame for its richness and splendour. No wonder, it prompted W.H. Russell, the British journalist who travelled to this part during the upheaval of the 1857-58:

"Is this the capital of semi-barbarious race, erected by a so-called corrupt, effect and degraded dynasty? Is this city in Oudh? I confess, I felt inclined to rub my eyes again and again. Not Rome, not Athens, not Constantinople not any a city, I have ever seen appears to me so striking and beautiful as this, and the more I gaze the more its beauties grow upon me".<sup>8</sup>

Alas, many of the impressive buildings of Lucknow were greatly damaged or completely destroyed during the fights of 1857-58. After recapturing the city in 1858 the British demolished many palaces and areas as an act of revenge. The cantonment was shifted from the north of the river to the south west, away from the main residential area. Brigadier-General Sir Robert Napier redrew the map of Lucknow by constructing many straight roads for the easy movement of the troops destroying a large number of buildings in the way. These roads still constitute the main arteries of the city on which bulk of the traffic moves. The economy of the city was severely damaged as the petrified people of the city ran away and the population of the city dwindled from around 7 lakhs to only 3 lakhs.

Railways came to Lucknow in 1862, the railway line dividing the city into two. A large number of talukdars built their residential houses in the city, though not as grand as the palaces of the Nawabs but still large and attractive buildings. Important educational institutions were also established during this period. Isabella Thoburn established a school of girls in 1871 in Lalbagh. The school later was upgraded to a degree college and shifted to a grand and impressive building in the north of the river in the neighbourhood of the university. Nadwa-tul-Ulema, a reputed site of Islamic theology, was established in 1894 by Maulana Shibli Nomani. The Colvin Talukdars College was also established around this time. Shia Degree College came into existence in 1917. Lucknow University was established in 1921. The famous Bhatkhande College of Music now a deemed university was established in 1926.

Another phase of construction and development started around 1920 when Sir Harcourt Butler, the then Governor, shifted the capital of the United Provinces to Lucknow, and foundation of the attractive buildings of the Council House, the Charbagh, Canning College, King George's Medical College were laid. Lucknow Improvement Trust was established in the same year. Sir Patrick Geddes, the famous town planner, was invited to prepare a development plan for Lucknow. It was during this period that the new Civil Lines, Mall avenue and Lajpat Nagar, etc. were added to the city. Cinema halls, theatres, new markets and offices were opened.

The large influx of refugees to Lucknow after partition led to the haphazard growth of localities and markets and added to the congestion in the old areas. Lucknow Municipality was upgraded at Municipal Corporation in 1959. Several new colonies were planned and developed. These included Mahanagar, Nishatganj, Niralanagar, Indiranagar, Aliganj and Gomtinagar. Lucknow has seen a burst of construction activities in the last decade or so with the mushrooming of a number of malls, multiplexes, multi-storeyed flats, which have changed the skyline of the city, giving it the look of a modern metropolis.

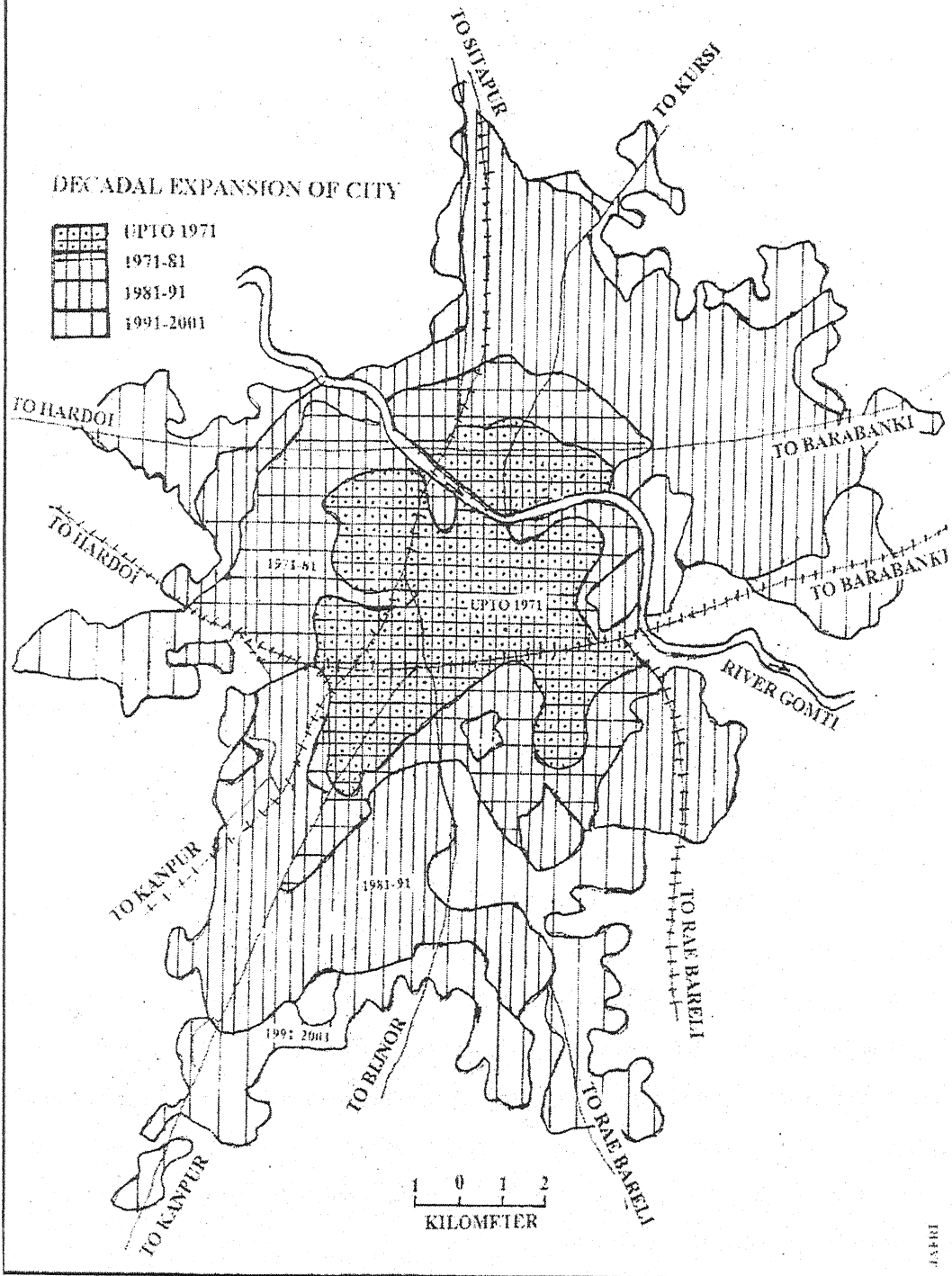
## **SPATIAL PATTERN AND MORPHOLOGY**

Till 1775 Lucknow was occupying an area of about 5 sq. km. around Chowk and Machchi Bhawan along the southern bank of river Gomti. By 1857, Lucknow had expanded to three-times of its original area mostly on the southern bank of the river barring a little area in trans-Gomti area. During 1856-1901 the city expansion stopped, except the establishment of the British Cantonment, which was shifted from Madaon in trans-Gomti area in the north to the southern part of the city. During 1901-50 new localities like Daliganj, Babuganj, Old Hyderabad, Nishatganj, etc. were developed in the trans-Gomti area, but the larger part of the city developed in the southern side of the river. Around 1950 the total city area of the city along with cantonment was about 50 sq. km. By 1971 the area of Lucknow had reached about 100 sq. km. and the residential schemes like Aliganj in trans-Gomti area and on Kanpur Road were expanded. After 1970s the growth of city got a special momentum and it expanded in areas between Sitapur and Faizabad roads in the north and in between Kanpur and Rae Bareilly roads in the south. Several new bridges were constructed over the river Gomti for smooth flow of traffic between the two parts of the city. During 1981-91, the area of the city had expanded from 145.94 sq. km. to 337.50 sq. km. (Map 1). As the city expanded the main CBD, i.e. Chowk was bifurcated and diversified and Aminabad, Hazratganj, and Alambagh became important commercial hubs. New market complexes have emerged in the newly developed colonies like Kapoorthala, Indiranagar and Gomtinagar. However, the older CBDs did not lose their traditional charm and importance. Almost all the main roads of the city have retail shops besides the residential buildings.

A big portion in of the city is occupied by Vidhan Sabha (old Council House) and its related residential buildings like Darul-Shafa, office buildings and government guest houses. Most of the industries are located in Talkatora and Aish Bagh, which are in the south of the city. Its major activities are located in and around Hazratganj area, therefore major traffic in the morning and evening are one sided. Educational institutions, which are located in between administrative and commercial areas, together create regular traffic jams and chaos.

Most of the roads of Lucknow are narrow slowing down the pace of traffic, which consists of both motorised vehicles and slow moving means of transport rickshaws, tongas, cycles and hand pushed carts as well as pedestrian traffic and stray animals obstructing the free flow of traffic.

# LUCKNOW METROPOLIS



In terms of population density and availability of civic facilities Lucknow can be divided into three distinct zones. The old parts of the city around Chowk and Aminabad have very high population density and are highly congested with narrow lanes and inadequate basic amenities. Most of the poor of the city live in part in slum like conditions. The new areas of Lucknow around Hazratganj, civil lines and the new planned colonies have much lower density and better civic conditions and is inhabited by the middle class and the rich, with a splattering of in authorised jhuggies and jhoparies. The sprawling cantonment with its old bungalows, wide roads and large trees constitutes the third distinct part of the city, which still retains the old British Raj charm.

### **POPULATION DYNAMICS**

Population growth of Lucknow over the last century has been shown in Table 1. In 1901 the total population of Luckow was 2,56,239. During the two early decades of the century, the population growth was negative due to high death rates caused by epidemics, etc. Since 1921 the city has however witnessed continuous and steady growth in population. The growth rate was particularly high during 1931 and 1941, due to the opening of new offices and influx of population following the shifting of the capital of United Provinces to Lucknow. The growth rate, however, slowed down to 28.33 per cent during 1941-51. The population of the city continued to grow at a steady rate during the next three decades. The population of Lucknow crossed the one million mark in 1981. The eighties witnessed a great jump of population of the city, showing an increase of 65.66 per cent over the decade. During 1991-2001 the population growth of the city was 34.53 per cent, crossing the two million mark. The city population is projected to increase to 32.26 lakh by 2011 and 45 lakh by 2021.

According to 1981 Census the population density of Lucknow agglomeration was about 6900 persons per sq. km., which reduced to about 4900 persons per sq. km. in 1991 census, as the city area expanded at an unprecedented rate. According to the 2001 census the population density was about 6700 persons per sq. km. The sex ratio was 871 in 1991 and improved to 888 in 2001. The literacy rate is relatively low but has been constantly rising from 57.54 per cent in 1981 to 60.27 in 1991 and further to 67.60 per cent in 2001. However, in comparison to male literacy, the female literacy is quite low. The proportion of working population was 26.51 per cent in 1991, but rose slightly to 27.51 per cent in 2001.

**Table-1 : Population Growth in Lucknow, 1901-2001**

Year	Lucknow Agglomeration			Lucknow Municipal Corporation			Lucknow Cantonment		
	Population	Decadal Growth	Percentage Growth	Population	Decadal Growth	Percentage Growth	Population	Decadal Growth	Percentage Growth
1901	256239	—	—	256239	—	—	—	—	—
1911	252114	-4125	-1.61	252114	-4125	-1.61	—	—	—
1921	240566	-11548	-4.58	240566	-11548	-4.58	—	—	—
1931	274659	34093	14.17	251057	10531	4.38	23562	—	—
1941	387177	112518	40.97	361294	110197	43.89	25883	2321	9.85
1951	496861	109684	28.33	459484	98190	27.18	37377	11494	44.41
1961	655673	158812	31.96	615523	156039	33.96	40150	2773	7.42
1971	813982	158309	24.14	774644	159121	25.85	39338	-812	-2.02
1981	1007604	193622	23.79	947990	173346	22.38	59614	20276	51.54
1991	1669204	661600	65.66	1619116	671125	70.79	50089	-9525	-15.98
2001	2245509	576305	34.53	2185927	566811	35.00	59582	9493	18.95
2011 (Projected)	3226000	900491	40.10	3166000	980073	44.84	60000	418	0.70
2011 (Projected)	4500000	1274000	39.49	4440000	1274000	40.24	60000	000	0.00

Source: *Census of India and Lucknow Master Plan, 2021.*

## ECONOMIC BASE AND WORK FORCE

To look at the nature of the dynamics of the city's growth we have to look at its economic base as revealed by the size and structure of labour force<sup>9</sup>. Table 2 shows the distribution of workers by industrial categories in Lucknow during 1981 and 1991. The data clearly reveal that Lucknow is essentially a service oriented city with 70.65 per cent of its male workers and 81.29 per cent of its female workers employed in the tertiary sector in 1991. The dominant category is that of the 'other workers' consisting of community, social and personal services, which provide employment to around 38 per cent of male workers and 69 per cent of female workers. Around 24.3 per cent of male workers and 10 per cent of female workers are employed in trade and commerce. 8.35 per cent of the male workers and 2.53 per cent of the female workers were engaged in transport and communication.

Table-2: Percent Distribution of Main Workers in Lucknow City

Category	Industrial Division	1981		1991	
		Male	Female	Male	Female
I	Cultivators	0.92	0.40	2.54	2.01
II	Agricultural Labourers	1.44	1.10	2.50	2.88
III	Livestock, Forestry, Fishing, etc.	1.01	0.44	2.21	1.71
IV	Mining & Quarrying	0.04	—	0.09	0.03
	<b>Primary Sector</b>	<b>3.41</b>	<b>1.94</b>	<b>7.34</b>	<b>6.63</b>
Va	Manufacturing Processing. Servicing and Repairs in House hold Industry	5.33	4.11	2.70	3.35
Vb	Manufacturing Processing. Servicing and repairs other than Household Industry	15.74	5.74	14.07	6.33
VI	Construction	1.95	2.81	5.24	2.40
	<b>Secondary Sector</b>	<b>23.02</b>	<b>12.66</b>	<b>22.01</b>	<b>12.07</b>
VII	Trade & Commerce	16.91	9.13	24.27	10.10
VIII	Transport, Storage & Communication	13.38	3.93	8.35	2.53
IX	Other Services	43.27	74.78	38.02	68.67
	<b>Tertiary Sector</b>	<b>73.56</b>	<b>87.84</b>	<b>70.65</b>	<b>81.29</b>
	<b>Total Workers (I-IX)</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

Source: *Census Reports*

Manufacturing sector accounted for 21.03 per cent of male workers and 9.85 per cent of female workers in 1981, but the proportion declined to 16.77 per cent in case of male workers in 1991 while that of female workers slightly increased. About one-sixth of manufacturing workers were engaged in household industry in case of male workers against one-third of female workers. 5.24 per cent of male workers and 2.40 per cent of female workers were engaged in construction activities.

The primary sector accounted for around 7 per cent of workers. This is mainly on account of inclusion of some rural areas in the city boundary, where agriculture and allied activities are still being carried out. Looking at the changes taking place over the decade 1981-91, we find that the proportion of workers shows a rise case of primary sector, construction, and trade and commerce, where as the proportion of workers in the categories of manufacturing, transport and other services shows a decline. This is reflective of the changing structure of employment in the city, which is facing a boom in construction activities and is emerging as a major trading and commercial centre. The service orientation of Lucknow city is further clear from a study of the distribution of workers by occupation division shown in Table 3.



**Table-3: Percent Distribution of Main Workers other than Cultivators and Agricultural Labourers by Occupational Division in Lucknow**

Occupational Division	1981			1991		
	Male	Female	Total	Male	Female	Total
Professional, Technical and Related workers	7.98	38.24	9.84	9.40	33.95	11.49
Administrative, Executive and Managerial Workers	3.48	1.08	3.33	4.35	2.11	4.16
Clerical and Related Workers	17.52	14.76	17.35	18.41	16.51	18.25
Sales Workers	13.92	5.45	13.46	19.37	7.37	18.35
Service Workers	8.71	14.89	9.09	7.90	12.19	8.26
Farmers, Fishermen, Hunter, etc.	0.90	0.34	0.89	1.02	0.74	1.00
Production & Related Workers	31.71	11.54	30.47	32.35	18.43	31.16
Workers not Classified by Occupation	15.78	12.70	15.59	6.95	8.70	7.33
Total Workers	100.00	100.00	100	100.00	100.00	100.00

Source: *Census Reports*

From the point of view of employment, production and related workers constitute the dominant category providing employment to a little less than one third of workers. Clerical and sales workers account for a little less than one-fifth of workers each, while over one-tenth workers are classified as professional and technical workers. The occupational pattern of male and female workers shows a clear difference. The proportion of female workers is distinctly higher as compared to males in the categories of professional and technical workers service workers, whereas that of males is higher for sales workers and production related workers.

Comparing the occupational pattern of workers in 1981 and 1991 it is observed that highest jump has taken place in case of sales workers followed by professional and technical workers and administrative and managerial workers. This again reflects the growing concentration of trading and commercial activities in Lucknow.

## **INDUSTRIES**

Though Lucknow has always been primarily an administrative centre and service oriented city, it has been known for its traditional manufactured products also. The number of workers in household industry was 12,194 in 1991 and jumped to 25,308 in 2001. Lucknow is renowned for its chikan work, kamdani, zardozi, gotamaking, jewellery making, perfumes and tobacco. In recent years Chikan industry of Lucknow has modernised itself with the introduction of new clothing material and designs and is much in demand the world over, giving a boost to the industry.

Around 60,000 workers were engaged in non-household industry in 1991. Among the major industries of Lucknow mention may be made of the Government Precision Tools Factory, the Scooters India Ltd., a joint sector company, the Hindustan Aeronautics Ltd. and TELCO. The city also has a number of small scale establishments like oil mills, flour mills, dal mills, ice factories, and units manufacturing bicycles, pharmaceuticals, surgical instruments and agricultural implements.



## **AMENITIES AND SERVICES**

The growth of Lucknow city is hampered in the northwest due to broken and water logged barrenness and to the southeast by cantonment and water logged pockets. The eastern side of the city is liable to floods because the land near the river is low lying. Most of the colonies are built without proper plinth, the adjoining roads are now elevated and the rain water is filled in the colonies for weeks together. Most of the newer colonies especially unauthorised ones don't have proper drainage and sewerage system. In some of the localities, e.g., Maqboolganj, Moulviganj, Yahiyaganj, Sadatganj and Newazganj more than 20 per cent households are recorded in 1991 census as houseless households. Lucknow Development Authority has failed to meet the needs of the common people by providing plots and houses at affordable prices.

The public health care facilities are not adequate for the growing population of the city and are under provided and over crowded. However, the private medical services and hospitals have been increasing in recent years. Today, Lucknow can boast of the best medical infrastructure available in U.P. consisting of one medical University, one medical college, one post graduate medical research centre, one dental university, six dental colleges, seven paramedical colleges, 35 PHCs, 43 hospitals, 56 nursing homes, 14 maternity homes, 872 clinics and 1550 registered private practitioners<sup>10</sup>. No wonder Lucknow is one of the most-sought-after medical destinations in north India.

Lucknow is an important educational centre of the country. Lucknow University was established in 1921. It has around 30 degree colleges located in the city attached to it. A central university named after Dr. B.R. Ambedkar was also established on the outskirts of the city in the early nineties. A large number of scientific research institutions under the umbrella of CSIR and ICAR are located in the city including the Central Drug Research Institute, Industrial Toxicological Research Centre, National Botanical Research Institute, Sugarcane Research Institute, Central Institute for Research in Medicinal and Aromatic Plants. The Railway Research and Design Organisation located over the southern part of the city is the only institution of its kind in Asia. Indian Institute of Management, Lucknow has also acquired an enviable position in the field of management education in the country. The Giri Institute of Development Studies is a nationally renowned social science research institute. Lucknow has been well known for the good quality of its school education for nearly a century attracting students from outside. A large number of private sector schools, professional training institutes and coaching centres have mushroomed in the city in recent years.

## **ENVIRONMENTAL POLLUTION**

The high population growth without proper planning and rapidly increasing number of petrol and diesel driven vehicles have made Lucknow one of the most polluted cities in India. Against a population of about 25 lakh now Lucknow has as many as 7.5 lakh vehicles and their number is rapidly increasing. Table 4 shows the number of motorised vehicles registered in 2004 and 2005 with R.T.O., Lucknow.

Table-4: Registered Motorized Vehicles with RTO, Lucknow

Type of Vehicles	No. of Registered Vehicles		Percentage rise
	2003-04	2004-05	
Multi Axial	419	567	35.52
Medium and Heavy weight vehicles	7528	7925	5.27
Three wheelers (Commercial)	1870	2525	35.03
Light Commercial four wheelers	4533	4994	10.17
Buses	3487	3678	5.48
Taxis	5473	5477	0.07
Three Wheelers (Passengers)	8514	8751	2.78
Two wheelers	543485	601737	10.72
Cars	75944	85309	12.33
Jeeps	11678	11959	2.49
Tractors	12309	12821	4.16
Trailers	913	914	0.11
Others	3173	3173	--
Total	679326	749830	10.38

Source: RTO, Lucknow.

Irregular power supply has forced people, business establishments and government office to install diesel driven generators, which are another important source of noise and air pollution. Table 4 shows the level of various kinds of polluting material in major localities of Lucknow. All the commercial localities like Charbagh, Husainganj, Chowk, Aminabad and Alambagh are having Suspended Particulate Material (SPM) beyond the prescribed limit of 360 microgram/m. Even the residential localities like Aliganj, Vikasnagar, Indiranagar and Gomtinagar are affected by suspended particulates beyond the prescribed limit of 140 microgram/m.<sup>3</sup>. However, Sulphur Dioxide (SO<sub>2</sub>) and Nitrogen Oxide (NO<sub>x</sub>) pollutants are less than the prescribed limits of 60 microgram/m<sup>3</sup> in residential and 80 microgram/m<sup>3</sup> in commercial/industrial areas. There is no prescribed limit of Formal Dehyde (HCHO), which shows comparatively higher figures in commercial areas. With the supply of unleaded petrol, the lead proportion in the atmosphere has reduced and is within the prescribed limit.

**Table 5: Average (24 Hours) Concentration Microgram per M<sup>3</sup> of Suspended Particulate Matters (SPM), Sulphur Dioxide (SO<sub>2</sub>), Nitrogen Oxide (NO<sub>x</sub>), Formal Dehydrate (HCHO) and Led (Pb)**

Location	Suspended Particulate Matters (SPM)		Sulphur Dioxide (SO <sub>2</sub> )		Nitrogen Oxide (NO <sub>x</sub> )		Formal Dehydrate (HCHO)		Led (Pb)		Noise Level [db(A)] (Nov.4, 2005)	
	Monsoon		Monsoon		Monsoon		Monsoon		Monsoon			
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Day	Night
<b>A. Residential</b>												
Aliganj	332	342	17.7	33.4	29.9	39.4	4.5	8.3	0.31	0.024	84.7	61.1
Vikas Nagar	403	322	16.4	26.2	29.6	27.6	5.4	8.1	0.13	0.078	71.7	58.9
Indiranagar	390	325	18.3	31.0	25.3	44.4	6.5	6.7	0.29	0.031	76.8	81.4
Gomtinagar	297	384	14.4	34.2	21.3	42.9	4.8	7.6	0.05	0.004	70.9	56.1
<b>B. Commercial</b>												
Charbagh	471	581	27.6	43.0	63.3	48.8	8.2	10.1	0.31	0.039	79.4	73.6
Husainganj	393	539	25.9	45.0	64.4	49.7	7.7	6.0	0.26	0.074	78.2	74.4
Chowk	390	421	24.2	34.7	53.5	52.6	6.6	11.0	0.08	0.258	75.8	72.1
Aminabad	430	459	23.0	42.0	42.1	42.2	4.3	9.2	0.61	0.035	80.9	54.3
Alambagh	378	474	25.8	40.6	62.2	58.5	6.1	10.6	0.06	0.050	77.6	72.6
<b>C. Industrial</b>												
Amausi	274	354	14.1	24.7	28.4	28.2	3.2	5.7	0.08	0.032	78.6	72.7

Source: Industrial Toxicological Research Centre, Lucknow, 2005.

Noise pollution during the day and the night is also higher than the prescribed limits in all the localities than the prescribed limits of noise for residential, commercial and industrial areas, that is, 55, 65 and 75 dB (A) in daytime and 45, 55 and 70 dB (A) in night time respectively.

The quality of drinking water has also been affected by pollution. Out of total 100 drinking water samples from 20 localities of Lucknow, 21.00 per cent water samples were found contaminated as per Bureau of Indian Standard (BIS, 1996). Overall in residential areas 14.55 per cent, in commercial areas 33.33 per cent and in industrial areas 20.00 per cent water samples were found contaminated.

### **SLUM POPULATION**

According to the 2001 Census the slum population of Lucknow was 179,176, i.e. 8.2 per cent of the total population. These slums are distributed over 45 wards of the city out of 110 wards. The highest concentration of slum population is found in Ward Nos. 4, 62, 83 and 87. The slum population seems to be an underestimate as the conditions in many other areas which are not officially designated as slums are hardly better.

A recent study covering 1025 sample households in 34 slums of Lucknow shows the poor living conditions in the slums<sup>11</sup>. Only 43.66 per cent slum dwellers were found to be literate. 19.25 per cent had education upto primary school, 10.11 per cent upto middle school, 7.58 per cent upto High School, 3.63 per cent upto Intermediate and 3.07 per cent upto degree level. Health conditions were found to be poor. Diseases related to tooth, stomach, skin and eye were commonly reported. The incidence of infant and child mortality was quite high.

The housing condition of slums was quite poor. 25.27 per cent houses were kutcha and 34.93 per cent were semi-pucca. Only 39.80 per cent houses were pucca. About 85 per cent houses were affected water logging throughout the year due to bad drainage system and low lying areas. Only 27.90 per cent houses were having toilets and only 17.85 per cent houses had bath facility in the house. About 60 per cent houses had electricity connection. 18.73 per cent households had tap water and 27.71 per cent had hand pump. 46.73 per cent households used public hand pumps, while 6.05 per cent used wells.

Development of the slum areas through proper provision of civic amenities and relocation of the slum population are urgently needed for improving the living conditions of the people and improvement of the city environment. The need is particularly urgent for the renewal of some of the old areas of the city, where population density is extremely high, lanes are narrow and congested, and basic amenities like drinking water are not available<sup>12</sup>

### **LAND USE PATTERN**

Most of the localities of Lucknow have a mixed pattern of land use as commercial, industrial and official areas are often located in residential area due to haphazard and unplanned growth. Table 6 shows the land use pattern in Lucknow. A little over half of the city area is under residential use. Official and commercial area account for 3.4 per cent and 2.2 per cent of city area respectively, while 6.1 per cent area is under industrial use. Community facilities and utilities cover 8.7 per cent of area and transport 7.6 percent area. Around 15 per cent area is under play grounds or open spaces. Between 1987 and 2005 the total area of Lucknow Corporation excluding cantonment increased by 77 per cent. Largest increase took place under residential use followed by official and commercial use. Open areas also expanded due to expansion of the city limits.

Table 6: **Land Utilisation Pattern in Lucknow: 1987 and 2005**

(Area in Hectares)

Land Utilisation	1987		2005		Percent
	Area	Percent	Area	Percent	Growth
Residential	4485.98	48.9	8945	55.0	99.40
Commercial	223.77	2.4	360	2.2	60.88
Official	474.69	5.0	560	3.4	17.97
Industrial	596.22	6.5	990	6.1	66.05
Entertainment (Park & Play Ground)	346.48	3.8	435	2.7	25.55
Community Facilities and Services/Utilities	902.02	9.8	1410	8.7	56.32
Transport	952.00	10.4	1240	7.6	30.25
River/Rivulet/Pond	193.66	2.1	310	1.9	60.07
Open Ground	996.14	10.9	2020	12.4	102.78
Total	9170.00	100.0	16270	100.0	77.43

Source: Town and country Planning Organisation, U.P., Master Plan of Lucknow, 2021.

To promote the development of the city in a planned manner a Master Plan of Lucknow was prepared by the Town and Country Planning Department, U.P. in 1970 covering the period upto 2001. The second Master Plan of Lucknow was finalised and implemented in 2001 covering the period upto 2021. Both the Master Plans were partially modified several times by the government which allowed change of areas marked as open spaces to residential or commercial activities under public pressure. The proposed land use under the two Master Plans is shown in Table 7 While the 2001 Master Plan had allocated 67.2 per cent of area to residential category, Master Plan of 2021 has allocated only 45 per cent area under this use. The new Master Plan envisages much larger area under entertainment (parks and play grounds) and transport.

Table 7: **Proposed Land Use for Lucknow**

(Area in Hec)

Land Utilisation Category	Master Plan 2001		Master Plan 2021	
	Area	Percent	Area	Percent
Residential	15924	67.20	18480	45.00
Commercial	983	4.10	1450	3.50
Official	379	1.70	520	1.30
Industrial	731	3.10	1665	4.10
Entertainment (Park & Play Ground)	1869	7.90	10055	24.50
Community Facilities and Services	1537	6.50	2500	6.10
Transport	2260	9.50	6405	15.50
Total	23682	100.00	41075	100.00

Source: Town and country Planning Organisation, U.P., *Master Plan of Lucknow, 2021.*

## CHANGING SOCIAL AND CULTURAL MİLIEU

More than anything else it is the culture of Lucknow which gives it distinctness. The very mention of the name of Lucknow evokes in the mind of the listener its unique culture captured in two words nazakat (delicacy) and nafasat (refinement). Lucknow has been, and to a certain extent still remains, a byword for finesse, delicacy, refinement, politeness, sophistication and a leisurely lifestyle<sup>13</sup>. This distinct culture was shaped by successive efflux of people from different races and cultures, e.g., the Hindus, the Pathans, the Mughals, Persians and later on the British.

During the rules of the nawabs Lucknow acquired an enviable reputation for its culture, art, music and poetry attracting well known artists and poets of the time to come to Lucknow and settle here. The kathak form of dance was developed around this time by Kalkadin and Bindadin under the patronage of the nawabs. Another especial contribution of Lucknow was the Lucknow school of urdu, which challenged the old school of urdu poetry of Delhi and Hyderabad. The marsiyas of Dabir and Anis are still recited during the Moharrum. There were regular Mushairas or poetic soirees where people used to recite their poetry. The tradition still continues.

Tolerance and spirit of accommodation have been the hallmark of the composite culture of Lucknow. The city has remained unaffected by the communal strife even during the turbulent period following the partition of the country. The ruler and the people of the city have always been willing to accommodate the new ideas and changes and adjust to them. Tradition here has mingled with modernity.

With the changing composition of its population following the shifting of capital of U.P. to Lucknow in 1920 and opening of many offices and educational institutions in the city, Lucknow city and its people started getting a modern look<sup>14</sup>. In the post Independence phase the changes took place at a faster pace. There was a large influx of refugees as well as immigrants from other rural and urban areas changing the cultural milieu of the city almost beyond recognition. Today's Lucknow youth are hardly distinguishable in their dress, behaviour and outlook from the youth of the other metropolitan centres of the country.

The physical appearance of Lucknow is also changing fast. Many of the old sprawling houses have been demolished to erect multi-storeyed residential flats and offices, which have come up all over the city especially in the newly developed colonies. Several malls, multiplexes and recreation parks have come up in the city frequented by the new rich and middle classes. The city is thus fast acquiring the looks of a modern metropolis.

## **FUTURE CHALLENGES**

The rapid growth of the city has also brought many problems in its wake. The infrastructure of the city is under heavy pressure and highly inadequate for its population. The city is faced with the problems of congestion, traffic jams, noise and chemical pollution, unauthorised constructions and encroachments of roads and public places, inadequate water supply, receding ground water table, frequent power failures, spread of slums and problems of waste disposal. Urgent action is needed by the Municipal Corporation, the city planners and the government to address these problems on a war footing. The major areas demanding immediate attention are:

1. The city hardly has a public transport system worth the name. Buses that ply on some of the main routes are too few and over crowded. Bulk of traffic moves on Tempos and Tata Sumos, which drive in a hazardous manner and add to pollution and congestion on roads. The flow of traffic needs to be regulated and managed properly to avoid jams and delays through effective planning. Adequate parking places in the markets and public places have to be provided. Over bridges need to be built over the numerous railway crossings across the city which hamper the smooth flow of traffic. The problem of stray cattle on the roads needs to be handled strictly. The city needs a modern rapid transport system as the city has expanded and distances between work place and place of residence have increased. This will also bring down the pollution levels.

2. The urban infrastructure of the city needs to be developed and modernised. The sewer system is more than hundred years old and dilapidated. Many congested localities do not have the sewer system at all. The facility of toilet is not available in a large number of houses inhabited by the poor. There is also acute shortage of houses particularly for the weaker sections. Waste disposal system is highly inadequate and is able to handle hardly half of the daily waste generated. One can see piles of waste lying on the roads in front of houses all over the place. Water supply system is facing crisis. The old water works draw water from Gomti are unable to meet the acute shortage of water. The city is relying increasingly on tubewells water for meeting its drinking water need. The ground water table is receding fast aggravating the problem of water supply. Many parts of the city do not have a functional street light system. Power supply is inadequate, irregular and subject to frequent rostering and breakdown.

3. Urban renewal of the old city, where the population density is the highest and most of the slums are found. There is lack of basic amenities and housing conditions are extremely bad. The problem of renewal of this part is also more difficult because of the crowded and narrow lanes, lack of space and also because the majority of the people living here belong to the poorer strata.

4. The high levels of noise, water and chemical pollution has affected adversely the quality of life of the people and creating health problems. River Gomti, where many of the drains bring the city garbage, has become so polluted that the aquatic life has been endangered and water is unfit for bathing and human consumption. Strong measures are needed to deal with the problem of pollution and controlling their sources.

5. Most of the historic buildings of Lucknow are in a poor state of maintenance and have suffered heavily through passage of time as well as encroachment by people. Conservation, preservation and development of these historical monuments pose a major challenge of Lucknow both for saving its historical heritage and developing it as a major tourist attraction. Apart from the 52 monuments which have been declared protected monuments by the Archaeological Survey of India, there are numerous other buildings, temples, mosques, etc. which are important remnants of Lucknow's glorious past and need to be well preserved by bringing them under the category of protected monuments and allocating adequate funds for their conservation and development.

Huge capital expenditure is needed to undertake the task of urban renewal of the city, which cannot be met by the meagre resources of the Lucknow Corporation. It is hoped that the recently announced National Urban Renewal Plan announced by the central government will meet a large part of the required funds for the development of the city. But the task cannot be completed without the involvement of the private sector and the people of the city.

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